

MISCELLANEA

LARVA OF THE TUMBU-FLY *CORDYLOBIA*
ANTHROPOPHAGA IN THE LOWER EYELID

PLATE XV

This case was shown to me by Dr. Wright of Freetown, under whose care it was. The larva, about one-third grown, had been removed some time before the photograph was taken and the swelling had largely subsided.

The Sir Alfred Lewis Jones Research Laboratory,

11.6.24.

B. BLACKLOCK, M.D.

THE HATCHING *IN VITRO* OF THE EGGS
OF *OXYURIS EQUI*

It is well known that the embryonated eggs of *Oxyuris equi* occasionally hatch in saline solution, but the phenomenon is an inconstant one, and Schwartz (1923) who has recently studied it, concludes that it is purely accidental. The larvae which emerge are usually motionless or show only feeble or transient activity, and as pointed out by Schwartz they often are nipped by the too narrow opening in the egg shell and fail to emerge completely. It would seem that this phenomenon is capable of a purely mechanical explanation, for we have observed it in the case of eggs which had been kept dry at a temperature of 27° C. for over seven months, in which the embryos, although well preserved, showed no signs of life. Some experiments were, therefore, carried out to determine if more

satisfactory results could be obtained with media, approximating in some respects more closely to those which, if the eggs were ingested, would be met with in the alimentary canal.

The eggs used were collected from the margin of the anus of a horse and contained active embryos: at the time when the experiments were made they had been kept dry, at a temperature of 27° C., for from one to two weeks. It was found that immersion of such eggs in an acid solution of pepsin for twenty minutes did not cause them to hatch, but that if they were then transferred to either a solution of pancreatic juice or to a saline solution of approximately equal alkalinity, a large number of active larvae emerged. As the result of further experiments, of which that given in the table is an example, it was found that immersion of the eggs first in an acid solution (Hydrochloric acid, 0.1 to 0.2 per cent.) for half-an-hour or longer, and then in an alkaline solution (Caustic Potash or Sodium Carbonate from 0.1 to 0.5 per cent.) invariably caused large numbers of active larvae to hatch, whereas the acid solution alone and the alkaline solution alone failed to produce this result. On comparing the action of an acid pepsin solution with that of a corresponding solution of acid alone, little difference was observed, but in one or two experiments the number of eggs which hatched in the former was rather greater.

Experiment to test the action of acid followed by alkali on eggs of *Oxyuris equi*.

Time	Normal saline solution		Hydrochloric acid, 0.1 per cent.	
5.15 p.m.	Experiment started		Experiment started	
5.45 p.m.	No free larvae	Some of the eggs transferred to 0.5 per cent. sodium carbonate solution.	No free larvae.	Some of the eggs transferred to 0.5 per cent. sodium carbonate solution.
6.10 p.m.	No free larvae	No free larvae	No free larvae	No free larvae
6.50 p.m.	No free larvae	No free larvae	No free larvae	A few larvae have hatched, most of them actively motile
8.10 p.m.	One free larva; appears dead	One free larva; appears dead	No free larvae	Very many larvae have hatched

R. M. GORDON and J. W. S. MACFIE.

The following parasites have been identified from animals which died at Sierra Leone.

Taenia taeniaeformis (Batsch, 1786) Wolffhügel, 1911.

Synonym: *T. crassicollis*, Rud., 1810.

Numerous specimens from domestic cats. The large hooks measured 385μ in length and the small hooks 225μ .

Cysticercus fasciolaris, Rud., 1808.

Two specimens from the liver of a rat.

Dipylidium caninum (Linn. 1758) Rail. 1892.

Four specimens from a civet cat and numerous specimens from dogs.

Hymenolepis diminuta (Rud., 1819) R. Blanchard, 1891.

Numerous specimens from rats.

T. SOUTHWELL.